Docket No. 3606-0120P

IN THE CLAIMS:

Please amend the claims as follows:

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2. (Amended) Method according to claim 1, characterized in that at each request for a communication service (Sx) the services employing the same number (Rx) of channels (Ci) of the requested service (Sx) are reordered in such a way that the attenuation (PLx) increases with priority values (Pi).

3. (Amended) Method according to claim 1 or 2, characterized in that it includes an allocation algorithm including the following operational steps:

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- first searching, starting from timeslots (Ti) with highest priority values (Pi), a timeslot (Tx) having a number of free channels (Ci) equal to the number (Rx) of channels (Ci) of the requested service (Sx);
- second searching, starting from timeslots with priority values (Pi) higher than that of the timeslot (Tx) found with the first search, a communication service (Sy) having the same number (Rx) of allocated channels (Ci);
- comparing the path loss values of the signals of the requested communication service (Sx) and of communication service (Sy) found with the second search;

- allocating, according to the result of this comparison, one of these communication services (Sx, Sy) in the timeslot (Tx) having said number (Rx) of free channels (Ci).

4. (Amended) Method according to claim 3, characterized in that said algorithm is reiterated according to the result of said comparison between the attenuation values of the signals of the requested communication service (Sx) and of the communication service (Sy) found with the second search.

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5. (Amended) Method according to claim 3, characterized in that it is searched, starting from timeslots with priority values (Pi) higher than that of the timeslot (Tx) found with this first search, the communication service (Sy) whose signals show the lower attenuation (PLm) among the communication services having the same number (Rx) of channels (Ci) allocated in the same timeslot (Tx).

6. (Amended) Method according to claim 1, characterized in that at each release of a communication service (Sx) are reordered according to increasing priority values (Pi) the services employing the same number (Rx) of channels (Ci) of the service released (Sx).

7. (Amended) Method according to claim 6, characterized in that it includes a release algorithm including the following

operational steps:

- third searching, among the timeslots with priority values (Pi) lower than that of the timeslot (Tx) of the released communication service (Sx), a timeslot (T) in which at least a communication service having the same number (Rx) of channels (Ci) of the communication service released (Sx) is allocated;
- allocating in the timeslot (Tx) of the released communication service (Sx) the communication service (Sy) characterised by the highest attenuation among all the services employing Rx channels (Ci) in the timeslot (T) found with the third search.

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8. (Amended) Method according to claim 7, characterized in that said third searching and allocating steps of the release algorithm are performed as in the following:

- third searching, among the timeslots with priority values (Pi) lower than that of the timeslot (Tx) of the released communication service (Sx), a timeslot (T) in which at least a communication service employing a number of channels (Ci) lower than that of the communication service released (Sx) is allocated;
- allocating in the timeslot (Tx) of the released communication service (Sx) the communication service (Sy) characterised by a higher attenuation amongst all the services employing a number of channels (Ci) lower than that of the communication service released (Sx) and which are allocated in the timeslot (T) found with the third search.

10. (Amended) Method according to claim 1, characterized in that at each allocation and/or release of a service, the priority values (Pi) assigned to the timeslots (Ti) are re-calculated on the basis of the following formula:

$$Pi(k) = \lambda Pi(k-1) + (1-\lambda)s_i(k),$$

where k is the instant at which the service is allocated or released, $s_i(k)$ is a logic function returning a number between 0 and 1 on the basis of the negative or positive result, respectively, of these requests for connection services and λ is a memory factor included between 0 and 1.

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11. (Amended) Method according to claim 10, characterized in that $s_i(k)$ is defined by the following formula:

$$s_i(k) = \frac{N_{free_i}(k)}{N_{\max} - N_{used_i}(k)};$$

in which $N_{free\ i}(k)$ is the number of channels Ci that can be allocated with a good quality in the timeslot i, N_{max} is the maximum number of channels available for each timeslot and $N_{used\ i}(k)$ is the number of channels presently already allocated in timeslot i.

12. (Amended) System for the dynamic allocation of radio channels (Ci) in digital telecommunication networks with time division duplex access, the system including at least one base

station (1) for the reception and transmission of radio signals associated to the radio channels (Ci) from/to a plurality of user equipment (2), the radio signals being divided in frames having pre-determined duration and each frame being divided into a pre-determined number of timeslots (Ti) which are assigned priority values (Pi) based on interference and/or quality measures of channels (Ci), each communication service (Sx) employing a particular number (Rx) of said channels (Ci) at a time, characterized in that said base station (1) includes means for the measurement of the path loss (PLx) of the signal with which said communication service (Sx) has been requested, as well as a control processor suitable to implement all the steps of the method according to claim 1.

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